

REMARKS

Claims 1-14 are pending in this application. Claims 1, 2 and 6 are amended herein. Upon entry of this amendment, claims 1-14 will be pending. Entry of this amendment and reconsideration of the rejections are respectfully requested.

No new matter has been introduced by this Amendment. Support for the amendments to the claims is discussed below.

Claim 6 is objected to because of informalities.

The objection is overcome by the amendment to claim 6, deleting the word “novel.”

Claims 1-5, 7-12 and 14 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. (Office action p.2)

The Examiner refers to the wording of “weight percentage of a chemical structure element ... based on the total molecular weight of the compound.” The Examiner also refers to the wording “represented by the following formula (2) ... which is expressed in formula (1).”

This portion of the rejection is overcome by the amendments to claims 1 and 2.

In the last clause of present claim 1, formula (2) illustrates the three-carbon and two-oxygen-atom “chemical structure element.” The structure element itself contributes a molecular weight contribution of 68. This structure element is found in the central part of formula (1).

The clarifying amendments to claims 1 and 2 are supported by the Examples on pages 25-52 of the specification, which refer to the “content of the active structural element C₃O₂,” making it

clear that formula (2) refers only to the three carbon atoms and two oxygen atoms, and that in this formula, the lines from the carbon atoms are simply bonds, not methyl groups. The attached groups are not shown in formula (2), since the formula refers to the structure element having three carbon atoms and two oxygen atoms.

The Examples illustrate how the weight percentage recited in the claims is calculated.

For example, in Example 1, the overall formula of 3,3-dimethyl-2,4-pentanedione is $C_7H_{12}O_2$, for a MW of about 128.1, and there is one C_3O_2 unit of FW = 68, and $68/128 = 53.1\%$, listed in the specification as 54%. Similar calculations apply to Examples 2-6, each of which has only one C_3O_2 structural unit.

In Example 7, the formula of diethyl 2,2-diacetyl-1,5-pentanedioate is $C_{13}H_{16}O_6$, and the overall MW of this compound is 268.2. There is one C_3O_2 unit, and the content is $68/268.2 = 25\%$, as given. From this example, it can be seen that the claim limitation regarding formula (2) refers to the central C_3O_2 structural unit of the compound, which can be seen in formula (1).

Example 29 (page 46), which has a formula of $C_{30}H_{48}O_{12}$, MW = 600.7, illustrates an example in which there are two C_3O_2 units, that is, $2 \times 68/600.7 = 22.6\%$, appearing as 22% in the specification.

That is, the last clause of claim 1 refers to each **separate** occurrence of the C_3O_2 structural element in the compound. Formula (1) in claim 1 illustrates one occurrence of this unit, but additional occurrences are possible. Each **separate** occurrence of the unit is counted as one occurrence of C_3O_2 (FW 68). Applicant submits that the amended last clauses of claims 1 and 2 clarify the claim recitation.

With regard to claim 4, the Examiner states that: "claim 4 should clearly recite that it is the

compound of formula (1) in claim 1 that has the structure of formula (5).” This portion of the rejection is respectfully traversed. Since there is only one “compound” in claim 1, the recitation of “the compound” in claim 4 is not ambiguous, and there is no need for the clarification suggested by the Examiner.

The Examiner also states with regard to claim 4 that: “it is not clear how ‘the compound has a least one structural element ...’ of the formula set forth.” Applicant submits that it is apparent that the “structure element represented by the following formula (5)” is a **substructure** of the recited compound. That is, the claim is requiring the presence of the substructure represented by formula (5) somewhere in the molecule of the compound.

These arguments are also applicable to the Examiner’s comments regarding claim 5. Claims 4 and 5 have therefore not been amended.

Claims 1-14 are rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,924,324. (Office action p.3)

Since U.S. Patent No. 6,924,324 is prior art only under section (e) of 35 U.S.C. 102, the rejection is respectfully traversed in accordance with 35 U.S.C. 103(c), as follows:

STATEMENT UNDER 35 U.S.C. 103(c) IN ACCORDANCE WITH MPEP 706.02(1)(2)

The present application and U.S. Patent No. 6,924,324 were, at the time of invention of the present application, owned by Dainippon Ink and Chemicals, Inc.

Claims 1-5, 7-12 and 14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No.

U.S. Patent Application Serial No. 10/507,209
Amendment filed May 5, 2006
Reply to OA dated December 8, 2005

6,924,324. (Office action p.4)

The rejection is obviated by Applicant's filing of a terminal disclaimer over U.S. Patent No. 6,924,324. The terminal disclaimer paper is filed concurrently with this Amendment.

In view of the aforementioned amendments and accompanying remarks, the claims, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the Applicant's undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, the Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Enclosures: Terminal Disclaimer
Petition for Extension of Time

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